

**METHODS AND DEVICE FOR PERCUTANEOUS REMOTE
ENDARTERECTOMY**

ABSTRACT OF THE DISCLOSURE

5 The present invention provides devices, systems, methods and kits for the
percutaneous removal of unwanted tissue or obstructive matter from body cavities or lumens,
particularly from the vasculature. Blood vessels, including the coronary, peripheral and
neurovascular circulation, which are narrowed or blocked by atheromatous material or plaque
are often treated with traditional endarterectomy procedures. The present invention allows
the benefits of such a procedure with an intraluminal approach, particularly a percutaneous
10 approach. Generally, the present invention provides a set of catheters or tools which are
percutaneously introduceable to the site of the blockage or occlusion. The tools dissect or cut
through the innermost tissue layer of the lumen to an underlying tissue layer. The innermost
tissue layer is then stripped away from the underlying layer with the occlusive material
thereattached. The detached tissue layer and occlusive material is then removed from the
15 lumen; this may include additional cutting, maceration and removal through mechanical
aspiration. In any case, the resulting lumen is free of obstruction.

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